BOBBY JINDAL
GOVERNOR

HAROLD LEGGETT, PH.D.
SECRETARY

State of Louisiana

DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL SERVICES

Certified Mail No.

Agency Interest (AI) No. 4885
Activity No. PER20070013

Mr. John F. Little III
Terminal Manager
International Matex Tank Terminals
PO Box 159
St. Rose, LA 70087

RE: Prevention of Significant Deterioration (PSD) Permit, St Rose Terminal, International Matex Tank Terminals (IMTT), St. Rose, St. Charles Parish, Louisiana

Dear Mr. Little III:

Enclosed is your permit, PSD-LA-736. Construction of the proposed project is not allowed until such time as the corresponding Part 70 Operating Permit is issued.

Should you have any questions, contact Corbet Mathis of the Air Permits Division at (225) 219-3126.

Sincerely,

Cheryl Sonnier Nolan
Assistant Secretary

Date

CSN:CMM

c: US EPA Region VI

Agency Interest No. 4885

PSD-LA-736

AUTHORIZATION TO CONSTRUCT AND OPERATE A MODIFIED MAJOR SOURCE PURSUANT TO THE PREVENTION OF SIGNIFICANT DETERIORATIONREGULATIONS IN LOUISIANA ENVIRONMENTAL REGULATORY CODE, LAC 33:III.509

In accordance with the provisions of the Louisiana Environmental Regulatory Code, LAC 33:III.509,

International Matex Tank Terminals - IMTT
11842 River Road
St. Rose, LA 70087

is authorized to construct the Heavy Fuel Oil Tank Construction Project at the St. Rose Terminal near

St. Rose, LA
St. Charles Parish

subject to the emissions limitations, monitoring requirements, and other conditions set forth hereinafter.

This permit and authorization to construct shall expire at midnight on _______________, 2010, unless physical on site construction has begun by such date, or binding agreements or contractual obligations to undertake a program of construction of the source are entered into by such date.

Signed this ________ day of __________________, 2008.

Cheryl Sonnier Nolan
Assistant Secretary
Office of Environmental Services
Louisiana Department of Environmental Quality

BRIEFING SHEET

ST. ROSE TERMINAL
AGENCY INTEREST NO. 4885
INTERNATIONAL MATEX TANK TERMINALS (IMTT)
ST. ROSE, ST. CHARLES PARISH, LOUISIANA
PSD-LA-736

PURPOSE

To construct eighteen (18) new heavy fuel oil tanks and install six (6) hot oil heaters.

RECOMMENDATION

Approval of the proposed construction and issuance of a permit.

REVIEWING AGENCY

Louisiana Department of Environmental Quality, Office of Environmental Services, Air Permits Division.

PROJECT DESCRIPTION

The primary activity of the St. Rose Terminal is the bulk storage of liquid products, which includes vegetable oils, chemicals, petroleum liquids, and petroleum products.

IMTT proposes to construct eighteen (18) Heavy Fuel Oil (HFO) storage tanks, including modifications to heavy fuel oil handling operations, and install six new 37.8 MM BTU/hr hot oil heaters. The new hot oil heaters will ultimately replace six of the existing heaters in the terminal's hot oil heating system in a phased program of construction.

Estimated emissions, in tons per year, are as follows:

Pollutant	Baseline Actual Emissions	Projected Actual Emissions/PTE	Contemporaneous Changes	Net Emissions Increase	PSD de minimis	Review required?
PM	-	7.89	-	+ 7.89	25	No
PM_{10}	-	7.89	-	+ 7.89	15	No
SO_2	-	34.89	-	+34.89	40	No
NO_X	-	80.40	-	+80.40	40	Yes
CO	-	37.44	-	+37.44	100	No
VOC	-	94.08	-	+94.08	40	Yes

TYPE OF REVIEW

Nitrogen Oxide (NO_X) and Volatile Organic Compound (VOC) emissions from the proposed major modification will be above PSD significance levels. Therefore, the requested permit was reviewed in accordance with PSD regulations for NO_X and VOC emissions. Emissions of LAC 33:III.Chapter 51-

regulated toxic air pollutants (TAP) have been reviewed pursuant to the requirements of the Louisiana Air Quality Regulations.

BEST AVAILABLE CONTROL TECHNOLOGY

NO_X and VOC emissions are above PSD significance levels and must undergo PSD analyses. The selection of control technology was based on the BACT analysis using a "top down" approach and included consideration of control of toxic materials.

BACT Determination for NO_X from Heaters

BACT is determined to be low NO_X burners on each heater. The emission limit will vary depending on the fuel fired. While firing 100% natural gas the NO_X BACT limit will be 0.036 lb/MM BTU and while firing 100% oil, the limit will be 0.166 lb/MM BTU.

BACT Determination for VOC from Heaters

BACT is determined to good combustion practices for VOC emissions from heaters with a VOC emission limit of 0.0055 lb/MM BTU at the heaters' maximum firing rate which is consistent with VOC limits found in the RACT, BACT, LAER Clearinghouse (RBLC) for similar recently permitted units.

BACT Determination for VOC from Heavy Fuel Oil Storage Tanks

BACT is determined to be fixed roof tanks for these sources and the materials that will be stored in the tanks.

BACT Determination for VOC from Loading Rack

BACT is determined to be the use of submerged filling for the new truck loadout operation. This work practice standard represents VOC BACT for this emission source.

AIR QUALITY IMPACT ANALYSIS

Prevention of Significant Deterioration regulations require an analysis of existing air quality for those pollutants emitted in significant amounts from a proposed major modification.

AERMOD modeling of NO_X emissions associated with the installation of the heaters show a maximum predicted annual NO_X impact above the significance level of 1 $\mu g/m^3$. Because the annual maximum impact for NO_X is below the de mimimis level of 14 $\mu g/m^3$, preconstruction monitoring is not required. However, further refined National Ambient Air Quality Standards (NAAQS) modeling and increment consumption analysis is required.

Dispersion modeling indicates the impact of NO_X is below the NAAQS and within the allowable NAAQS increment consumption limits of this pollutant.

BRIEFING SHEET

ST. ROSE TERMINAL
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PSD-LA-736

Since the predicted maximum increment consumption for NO_X emissions are below the applicable increment standards, the installation of the Heavy Fuel Oil Construction Project emissions sources will not cause or contribute to any PSD increment violation.

ADDITIONAL IMPACTS

Soils, vegetation, and visibility will not be adversely impacted by the proposed facility, nor will any Class I area be affected. The project will not result in any significant secondary growth effects. No new permanent jobs will be created.

PROCESSING TIME

Application Dated:	November 29, 2007
Application Received:	December 3, 2007
Additional Information Dated:	May 2, 2008
Effective Completeness Date:	May 2, 2008

PUBLIC NOTICE

A notice requesting public comment on the proposed project was published in *The Advocate*, Baton Rouge, Louisiana, on <<**Date**>>, 2008; and in *St. Charles Herald-Guide*, Boutte, Louisiana, on <<**Date**>>, 2008. Copies of the public notice were also mailed to individuals who have requested to be placed on the mailing list maintained by the Office of Environmental Services on <<**Date**>>, 2008. A proposed permit was also submitted to U.S. EPA Region VI on <<**Date**>>, 2008. All comments will be considered prior to a final permit decision.

PRELIMINARY DETERMINATION SUMMARY

International Matex Tank Terminals - St Rose Terminal
Agency Interest No.: 4885
International Matex Tank Terminals - IMTT
St. Rose, St. Charles Parish, Louisiana
PSD-LA-736
May 2, 2008

I. APPLICANT

International Matex Tank Terminals (IMTT)
St. Rose Terminal
P.O. Box 159
St. Rose, LA 70087-0159

II. LOCATION

The St. Rose Terminal is located at 11842 River Road, St. Rose, St. Charles Parish, Louisiana. Approximate UTM coordinates are 775.05 kilometers East, 3322.00 kilometers North, zone 15.

III. PROJECT DESCRIPTION

IMTT is proposing to construct eighteen (18) heavy fuel oil tanks and ancillary equipment. The construction of the tanks and ancillary equipment are physical changes that will result in an increase in actual emissions of Volatile Organic Compounds (VOC) from breathing and working losses attributable to the new tanks. Additional new VOC emissions will occur as fugitive emissions from new piping and equipment components. Finally, there will be an increase in VOC emissions from loading HFO products into tank trucks at a new load-out station and from loading HFO products into marine vessels through the terminal's existing marine load-out facilities.

IMTT also is proposing to install six (6) new hot oil heaters. The terminal was granted approval of the installation of three (3) new 37.8 MM BTU/hr hot oil heaters as approved in Part 70 Permit No. 2520-00033-V1 issued August 29, 2006. These new hot oil heaters are being acquired to replace three existing heaters in existing hot oil heating system. To date, these hot oil heaters have not been constructed. With the advent of the project to construct the eighteen HFO tanks, IMTT has determined that the terminal's existing hot oil heaters, which were installed in the early 1970's, are not sufficiently reliable to provide the heating needs required on a long term basis and has identified a need to replace three more of the existing hot oil heaters. Since this additional need has been identified within approximately one year of having received approval for the replacement of the first set of three existing hot oil heaters and since the need to provide heat for the new HFO tanks, IMTT has determined that the acquisition of all six new 37.8 MM BTU/hr hot oil heater should be aggregated and considered as a part of the new HFO tank construction project. The new hot oil heaters will be capable of being fired on either natural gas or low sulfur No. 2 Fuel Oil. The emission increases for the new hot oil heaters have been calculated based on the use of the "worse case" fuel on a pollutant-specific basis.

PRELIMINARY DETERMINATION SUMMARY

International Matex Tank Terminals - St Rose Terminal
Agency Interest No.: 4885
International Matex Tank Terminals - IMTT
St. Rose, St. Charles Parish, Louisiana
PSD-LA-736
May 2, 2008

Estimated emissions, in tons per year, are as follows:

Pollutant	Baseline Actual Emissions	Projected Actual Emissions/PTE	Contemporaneous Changes	Net Emissions Increase	PSD de minimis	Review required?
PM	-	7.89	-	+ 7.89	25	No
PM_{10}	-	7.89	-	+ 7.89	15	No
SO_2	-	34.89	-	+34.89	40	No
NO_X	-	80.40	-	+80.40	40	Yes
CO	-	37.44	-	+37.44	100	No
VOC	-	94.08	-	+94.08	40	Yes

IV. SOURCE IMPACT ANALYSIS

A proposed net increase in the emission rate of a regulated pollutant above de minimis levels for new major or modified major stationary sources requires review under Prevention of Significant Deterioration regulations, 40 CFR 52.21. PSD review entails the following analyses:

A. A determination of the Best Available Control Technology (BACT);

B. An analysis of the existing air quality and a determination of whether or not preconstruction or postconstruction monitoring will be required;

C. An analysis of the source's impact on total air quality to ensure compliance with the National Ambient Air Quality Standards (NAAQS);

D. An analysis of the PSD increment consumption;

E. An analysis of the source related growth impacts;

F. An analysis of source related growth impacts on soils, vegetation, and visibility;

G. A Class I Area impact analysis; and

H. An analysis of the impact of toxic compound emissions.

PRELIMINARY DETERMINATION SUMMARY

International Matex Tank Terminals - St Rose Terminal
Agency Interest No.: 4885
International Matex Tank Terminals - IMTT
St. Rose, St. Charles Parish, Louisiana
PSD-LA-736
May 2, 2008

A. BEST AVAILABLE CONTROL TECHNOLOGY

Under current PSD regulations, an analysis of "top down" BACT is required for the control of each regulated pollutant emitted from a modified major stationary in excess of the specified significant emission rates. The top down approach to the BACT process involves determining the most stringent control technique available for a similar or identical source. If it can be shown that this level of control is infeasible based on technical, environmental, energy, and/or cost considerations, then it is rejected and the next most stringent level of control is determined and similarly evaluated. This process continues until a control level is arrived at which cannot be eliminated for any technical, environmental, or economic reason. A technically feasible control strategy is one that has been demonstrated to function efficiently on identical or similar processes. Additionally, BACT shall not result in emissions of any pollutant which would exceed any applicable standard under 40 CFR Parts 60 and 61.

For this project, BACT analyses are required for NO_X and VOC emissions from the Heavy Fuel Oil Tank Construction Project.

BACT analyses for NOx

There are two basic ways of controlling NO_X emissions from these type of heaters: Low-NO_X Burners technology and Post Combustion NO_X control technologies. Post Combustion NO_X control technologies that are commercially available include $SCONO_X^{TM}$, Selective Non-Catalytic Reduction (SNCR), and Selective Catalytic Reduction (SCR).

Low-NO_X Burner Technology

Low-NO_X burner (LNB) technology covers a wide range of burner types because there are currently several generations of burner technology on the market depending on fuel type, application (boiler, heater, dryer, etc.), and emission levels targeted. All LNB technologies reduce the rate of NO_X formation by lowering the peak and average combustion temperature. One way this is accomplished is by staging the introduction of the air and/or recirculated flue gas with the fuel into two zones: a primary and secondary combustion zone. The most recent LNB designs have improved mixing of air and fuel in the primary and secondary zones by either premixing the air/flue gas with the fuel prior to the burner flame or enhancing the mixing capability through the use of an increasing number of tiny fuel/air ports in the burner tip. In addition, more advanced burner designs also incorporate the use of external flue gas recirculation, which works to reduce NO_X emissions because the recirculated flue gas is lean in oxygen and acts to quench the flame temperature. Premixing of the fuel with flue gas and/or air also reduces the peak and average flame temperatures because the premixed air acts as a dilutent while also working to reduce localized hot spots associated with extremely high NO_X formation rates.

As noted above, LNB designs reduce the rate of NO_X formation by lowering the peak and average combustion temperatures. Low-NO_X burner technology is regarded as reliable and had been used extensively to satisfy BACT requirements for new industrial and commercial gas and oil fired boilers and heaters. The following table identifies Low-NO_X burner technology available for this project.

Heat Transfer Fluid Heater Burner Options

Burner Type	Gas Firing NO_X Guarantee* (ppmvd)	Oil Firing NO_X Guarantee* (ppmvd)
Standard Burner	80	130
Low-NO_X Burner	30	130
Low-Low NO_X Burner	20	65
Ultra Low-NO_X Burner	12	65

*Guarantees are for dual-fuel burners at 3% O_2 and 100% load.

<u>Post Combustion NO_X Control Technology</u>

SCONO$_X$™, recently renamed EM$_X$™, is a trade name for a proprietary NO_X control technology marketed by EmeraChem, LLC. The SCONO$_X$™ system uses a potassium carbonate-coated platinum catalyst to oxidize CO to CO_2 and reduce NO_X to N_2 and water. The effective operating temperature for SCONO$_X$™ is 280°F to 750°F, with 500°F to 700°F being the optimum range for NO_X removal. Regeneration of the NO_X saturated carbonate is accomplished by passing a dilute hydrogen reducing gas across the surface of the catalyst in the absence of oxygen. The sections of the reactor catalyst being regenerated are isolated from exhaust gases using sets of louvers on the upstream and downstream side of each reactor box. Multiple catalyst reactor boxes are required with some in the oxidation/absorption cycle and some in the regeneration cycle at any given time. The catalyst beds must also be rejuvenated every six months to one year by dipping them in a solution of potassium carbonate. SCONO$_X$™ produces approximately twice the pressure drop of SCR.

The SCONO$_X$™ catalyst is subject to fouling and masking degradation as a result of trace impurities either from the combustion gases or from ambient air. The SCONO$_X$™ bed preferentially absorbs sulfur compounds, and therefore the system is highly sensitive to sulfur concentrations in the combustion gases. SO_2 in the combustion gas is oxidized to SO_3, which reacts with the potassium carbonate to form potassium sulfate. Sulfur effectively deactivates the sorbent and regeneration produces hydrogen sulfide which must be treated or disposed of. Where sulfur compounds are present, including even minor sulfur concentrations associated with some pipeline natural gas applications, the fuel must either be pretreated (e.g., scrubbed to remove sulfur to below a 1 ppmv level), or a second catalyst bed known as SCOSO$_X$ must be placed before the SCONO$_X$ bed to capture the sulfur compounds.

To date, SCONO$_X$™ has only been commercially demonstrated on natural gas-fired electric utility combustion turbine sources with "clean" exhaust streams (i.e., units fired with very low-sulfur pipeline quality natural gas). Such fuels have very low sulfur content, partially in the form of mercaptans (at less than 1 ppmv) used for ordorization. This very low sulfur content results in sufficiently low SO_2 in the exhaust gas that can be tolerated by the SCONO$_X$™ catalyst. This technology has not been applied to oil-fired units, boilers, or heaters.

Selective Catalytic Reduction (SCR) systems use ammonia to reduce NO_X emissions by injecting ammonia into the exhaust gas stream up stream of a catalyst. Ammonia is absorbed on the catalyst surface where it selectively reacts with NO_X in the presence of oxygen to form nitrogen and water.

The chemical reactions involved in the SCR process are:

$$4NO + 4NH_3 + O_2 \rightarrow 4N_2 + 6H_2O$$
$$6NO_2 + 8NH_3 \rightarrow 7N_2 + 12H_2O$$

Catalyst performance is optimized when the oxygen level in the exhaust gas stream is above two to three percent. Commercial applications of this technology have been demonstrated over a temperature range from 350°F to 1000°F. The catalyst material that is used defines the optimal temperature range. In the absence of sulfur compounds in the gas to be treated, precious metal catalysts can be used to promote the reduction reactions at temperatures as low as 350°F. Base metal oxide catalysts, such as vanadium and titanium, work best in the temperature range from about 600°F to 800°F. Zeolite-based and some newer base-metal catalysts work up to 1,000°F. The removal efficiency of an SCR system in good working order is typically between 65 to 90 percent. SCR system boilers can operate alone, but they can also be used in conjunction with low-NO_X burners to reduce NO_X emissions to very low levels.

Ammonia, in the form of either liquid anhydrous ammonia or aqueous ammonium hydroxide, is stored on site and injected into the exhaust stream upstream of the catalyst. As the target NO_X reduction efficiency increases, the amount of ammonia slip increases due to the non-uniform distribution of reacting gases and the higher ratio of ammonia-to-NO_X required to achieve higher reductions. Issues related to ammonia transport and storage, ammonia slip emissions, and the associated increase in fine particulate matter (PM_{10}) emissions are all consideration when specifying an SCR control system.

The catalytic NO_X-ammonia reaction is temperature dependant. As such, SCR is well demonstrated in base loaded combined cycle natural gas-fired turbine applications where the SCR operating temperature is well-defined and sufficient residence time can readily be provided in the heat recovery steam generator section of the unit. There are only a few documented installations of SCR in natural gas fired packaged boiler applications where the operating temperature is not as constant. In combined cycle applications, SCR catalyst and ammonia injection grids are typically installed between the tube bundles within the heat recovery steam generator where the flue gas temperature remains within the required temperature range during base load operations. Automatic controls are used to cut back ammonia feed when the catalyst bed is below the set point temperature (e.g., during startup, shutdown, and partial load operation). In the planned heat transfer fluid heaters, the temperature at the exit of the convective section of the furnace will be less than 500°F at 100% firing rate. This temperature is below that at which SCR can function in the presence of any appreciable level of fuel sulfur including the limited SO_2 that will be emitted while firing low sulfur fuel oil in these heaters.

Selective Non-Catalytic Reduction (SNCR) systems reduce NO_X by injecting ammonia or urea (i.e., a selective reactant) into the high-temperature regions (i.e., 1,500°F to 2,000°F) of a furnace where the ammonia will selectively react with NO_X to produce nitrogen and water. The chemical reactions are similar to those in an SCR system, but they don't require a catalyst to proceed. In additions to operating temperature requirements, good mixing and sufficient residence time (i.e., greater than 0.5 seconds) at temperature must also be present. The combined temperature and residence time requirements are the reason that this method of control is well demonstrated on large industrial and utility sized boilers. Careful temperature control is needed; if the operating temperature is too low, untreated ammonia will pass directly through the system to the atmosphere.

If the operating temperature is too high, ammonia will be oxidized to NO and more NO_X will be emitted than if no controls were present. Based on the USEPA ACT document for industrial gas-fired boilers, vendors reported NO_X reductions of 30% to 65% for packaged watertube boilers. Such boilers are similar to the proposed heat transfer fluid heaters, but the internal temperature profiles are different.

Two SNCR processes are in commercial use today: Thermal $DeNO_X$®, developed by Exxon is an example of technologies that use ammonia as the reducing agent; NO_XOUT® is an example of an SNCR process that uses chemically treated urea as the reducing agent. At injection temperatures, the urea rapidly decomposes to form ammonia and other reactive reduced ammonia compounds. Chemical storage and handling facilities must be built to accommodate either of these reagents.

Both SNCR processes have an optimum temperature window of between 1,600°F to 1,900°F. As the desired NO_X removal efficiency is increased, the amount of ammonia slip increases due to the non-uniform distribution of reacting gases and the higher ratio of injected ammonia to NO_X required to achieve the higher reductions. Issues related to ammonia transport and storage, ammonia slip emissions, and the associated increase in fine particulate matter (PM_{10}) emissions are all considerations when specifying an SNCR control system.

The exhaust temperature at the entrance to the convective section of the furnace is below 1,600°F. Thus, the only location in the proposed heat transfer fluid heaters where the temperatures are suitable for SNCR is in the radiant section of the furnace. Due to the high average temperatures in this section of the furnace along with the limited residence time, there is no suitable location for installation of an SNCR system in this section of the heater. At 100% firing rate, temperatures at the exit of the radiant section are below the optimum window for SNCR reactions. These temperatures would be expected to be even lower at reduced firing rates.

Of the NO_X control options identified for potential application to the proposed heat transfer fluid heaters, $SCONO_X$, SNCR, and SCR are considered technically infeasible. $SCONO_X$ is considered infeasible because it has not been demonstrated on boilers or heaters such as the ones to be installed at the St. Rose Terminal. Currently, EmeraChem lists industrial boilers as a "future application" for $SCONO_X$ and indicates that, to date, only pilot testing has been done. In addition, the relatively elevated sulfur levels in fuel oil make $SCONO_X$ infeasible for this application.

Small heaters, such as the ones planned for this project, are compact and generally have insufficient residence time at the correct temperature to allow effective use of SNCR technology. Thus, the application of SNCR to the planned heater units would require a unique design. This approach represents a complex technology transfer project that has not been commercially demonstrated, nor is it available when purchasing a standard heater. Additionally, ultra low-NO_X burner technology can achieve lower NO_X emissions when firing gas than can be achieved with SNCR technology alone, but at much lower costs. As such SNCR is not considered a technically feasible control option.

Like SNCR, SCR requires a specific temperature range to function. The standard "off the shelf" heater design selected for this project does not contain a suitable location for installation of an SCR system. The temperature at the entrance to the convective section is too high and the temperature at the exit is too low. Thus, the convective section would have to be completely re-engineered to allow installation of an SCR system. Even then, it is unlikely that the temperature would be in the proper range over the expected range of firing rates for these heaters. For this reason, SCR is not considered a technically feasible control option for the proposed heaters.

The feasible NO_X BACT control technologies for this type of heater are Low-NO_X Burners, Low-Low NO_X Burners, and Ultra Low-NO_X Burners. As demonstrated in Table I (BACT Cost Summary), Low-Low NO_X Burner and Ultra Low-NO_X Burner options are economically infeasible, as the minimum cost effectiveness is approximately $10,222 per ton.

BACT Determination for NO_X from Heater

IMTT proposes to install low NO_X burners on each heater. The emission limit will vary depending on the fuel fired. While firing 100% natural gas the NO_X BACT limit will be 0.036 lb/MM BTU and while firing 100% oil, the limit will be 0.166 lb/MM BTU. Low-NO_X burners to limit NO_X emission to 0.036 lb/MM BTU (Natural gas fired) and 0.166 lb/MM BTU (fuel oil fired) are determined as BACT for NO_X emissions from the heaters. Compliance with these limits will be demonstrated through an initial compliance test using U.S. EPA Method 7E or equivalent.

BACT analyses for VOC

BACT analyses for VOC from Heaters

VOC will be emitted from the heat transfer fluid heaters as a result of incomplete fuel combustion. Good Combustion Practices and oxidation catalyst technologies are the methods of controlling VOC emissions from this type of heater.

Good Combustion Practices generally require the following:

- High Temperatures
- Sufficient Excess Air
- Sufficient Residence Times
- Good Air/Fuel Mixing

As with most types of fossil fuel-fired combustors, combustion control is the most effective means for reducing CO and VOC emissions from the proposed gas/oil fired heaters. Combustion efficiency is related to the three "T's" of combustion: Time, Temperature, and Turbulence. These components of combustion efficiency are designed into the heater to maximize furl efficiency and reduce operating costs. Therefore, good combustion practices are accomplished primarily through heater design and proper operation of the unit.

Changes in excess air affect the availability of oxygen and combustion efficiency. Very low or very high excess air levels will result in high CO and VOC formation rates, and can also affect NO_X formation. Increased excess air levels will reduce the emissions of CO and VOC up to the point that so much excess air is introduced that the overall combustion temperatures begin to drop significantly. If combustion temperatures drop significantly, then heater efficiency and achieved temperatures are also negatively affected.

Each combustion system has an optimum level of excess air to ensure maximum fuel efficiency while also ensuring proper operation of the burner system. The low- NO_X burner system proposed for these heaters is no exception. Proper operation of these burners will be accomplished by the installation of a burner management system and then operation of this system in accordance with the manufacturer's instructions. This will result in a VOC emissions rat of 0.21 lb/hr/heater or less at a 100% firing rate.

Oxidation Catalysts have been used to reduce CO emissions from natural gas and oil-fired combustion turbines, but such catalysts have not been used for gas/oil fired heaters similar to those proposed to be installed as part of this project. This same catalyst incidentally reduces VOC emissions, but that is not the primary function of the catalysts that have been installed on combustion sources pursuant to BACT requirements.

The typical oxidation catalyst for CO is a rhodium or platinum (noble metal) catalyst on an alumina support material. This catalyst is installed in an enlarged duct or reactor with flue gas inlet and outlet distribution plates. Optimum catalyst operating temperatures range from about 500°F to 1,100°F.

The proposed heater exhaust temperature will be a maximum of 475°F and flue gas temperatures in the furnace prior to the convective heat transfer section are much greater than 1,100°F. As a result, a suitable location within the convective heat transfer section of the heater would be required in order to provide the proper temperature range and residence time for the oxidation catalyst to function effectively. Such a location does not exist in standard "off the shelf" heater designs. Thus selection of this option would require a complex technology transfer effort that has not been commercially demonstrated, not is it available when purchasing a standard heater design.

Another issue associated with application of an oxidation catalyst to the heater exhaust is the inherently low VOC concentrations in the heater exhaust. At 100% load, the VOC (as propane) concentration in the heater exhaust is estimated to be less than 4 ppmv. This concentration is so low that an oxidation catalyst would not be expected to be effective in achieving any significant reductions. For these reasons, an oxidation catalyst is not considered as feasible technology when evaluating VOC BACT for these sources.

<u>BACT Determination for VOC from Heaters</u>

IMTT is proposing good combustion practices as BACT for VOC emissions from heaters with a VOC emission limit of 0.21 lb/hr/heater. This limit is equivalent to 0.0055 lb/MM BTU at the heaters' maximum firing rate and is consistent with VOC limits found in the RBLC for similar recently permitted units. Good combustion practices to limit VOC emissions to 0.0055 lb/MM BTU are determined as BACT for VOC emissions from the heaters. Compliance with this limit will be demonstrated through an initial compliance test using U.S. EPA Method 25A or an equivalent method.

<u>BACT analysis for VOC from Heavy Fuel Oil Storage Tanks</u>

Emissions of VOC from the new proposed storage tanks at the St. Rose Terminal will result from tank working and breathing losses as well as losses that will result from purging operations. Technologies identified for control of VOC emission from the storage tank can be divided into two general categories: design and/or work practice standards and add-on controls. The specific techniques examined in these categories include:

- Fixed roof tanks
- Fixed roof tanks equipped with conservation (pressure/vacuum) vents
- Floating rook tanks (internal or external)
- Fixed roof tanks equipped with vapor collection and control equipment.

Fixed Roof Tanks – The New Source Performance Standard (NSPS) potentially applicable to the new heavy fuel oil storage tanks is 40 CFR 60 Subpart Kb. However, large tanks (i.e., larger than 40,000 gallons) that store liquids with vapor pressures below 3.5 kPa (approximately 0.5 psi) are exempt from the NSPS requirements. This sets the BACT floor for these storage tanks.

Fixed Roof Tanks with Conservation Vents – A common addition to an atmospheric fixed roof tank is a conservation or pressure/vacuum vent. These vents prevent vapors from escaping a tank over a small pressure range. By equipping a tank with a conservation vent, emissions of VOC are reduced slightly as tank breathing losses tend to be suppressed. Installation of conservation vents on the new tanks at the St. Rose Terminal is projected to reduce VOC emissions by 1.8 tons per year. However, based on the planned operation of the new tanks, it is not technically feasible to install conservation vents on the storage tanks. There are two principal reasons for this conclusion. First, the use of compressed air to purge delivery pipelines will result in periodic surges in tank vent vapor emissions as the compressed air enters the tank. Under these operating conditions, the conservation vents will be temporarily overwhelmed by the flow to the tank. Although the vents could be oversized to account for this surge, another issue exists with this purge operation. Due to the highly viscous nature of the material stored in these tanks, there is a significant possibility that mist entrained in the purge air could foul the conservation vent mechanism causing the vent to fail. If such a failure occurs, the tank could become over-pressured and rupture. For these reasons, and because the maximum potential environmental benefit from the installation of conservation vents is minimal, the use of conservation vents is not technically feasible for this application.

Floating Roof Tanks – If floating roof tanks were constructed instead of fixed roof tanks, the potential VOC emissions from the new tanks could be reduced significantly. There are internal and external floating roof tanks which differ slightly in characteristics, but generally they operate on the same principal. The floating roof consists of a deck, fittings, and a rim seal. Floating roof tanks reduce emissions by reducing or eliminating the vapor space between the liquid surface and the roof of the tank. Thus, as the tank is filled, the roof rises, but no vapors are displaced. Also, breathing losses are substantially reduced since little or no vapor space exists above the liquid surface. VOC losses from floating roof tanks result primarily from leakage around seals and fittings in the roof as well as losses due to evaporation of clingage (i.e., liquid adhering to the tank walls) as the tanks are emptied.

Floating roof tanks are commonly used to control emissions from tanks that store light liquids such as gasoline. In fact, this storage method is required by the applicable NSPS. Use of floating roof tanks is, however, not a feasible option for the new tanks to be constructed at the St. Rose Terminal for the following reasons. First, the need to purge the supply pipelines into the tanks after material has been transferred into the tank is incompatible with the floating roof design. With a floating roof, the compressed air would not be able to easily escape. As it enters the tank it could damage the roof and it might also result in a hazardous condition as it rests on the liquid surface in a compressed condition. Also, due to the nature of the material stored in the tanks, some deposition of product is expected on the tank walls as the liquid cools. These deposits would interfere with the operation of the floating roof and could also damage the seals, making the floating roof an ineffective control device. For these reasons, floating roofs are deemed to be a technically infeasible control option for the new storage tanks.

Fixed Roof Tanks with Vapor Collection and Control - A final control option available for storage tanks of this type is the use of a vapor collection and control system. Such a system collects vapors that are displaced from the storage tank as it is filled, or as it "breathes". Collected vapors are routed from the tanks through piping to a central control device where they may either be recovered or incinerated. AP-42 estimates that control efficiencies for these options range from 90 to 99%. For purposes of this BACT analysis an overall control efficiency of 95% was assumed.

Although several options for control of collected vapors exist, a flare was selected as the basis for this BACT analysis. A flare was selected due to the intermittent and variable flow of the off-gas stream expected to result from collection of vapors from the tank farm. Other control options are expected to be more expensive than flaring.

Although vapor collection and control is projected to be a technically feasible option for the new tanks, there are some questions related to safe operation of such a system as applied to materials being stored in these tanks. One issue is whether the required detonation arrestors that must be installed between the flare and each tank would be reliable given the nature of the tank operations and the materials stored. Although this uncertainty exists, for purposes of this analysis, it is assumed that this issue can be satisfactorily resolved within the budget of costs provided in the economic impact analysis.

BACT Determination for VOC Heavy Fuel Oil Storage Tanks

Of the control options identified for the storage tanks, only the use of fixed roof tanks with and without a vapor collection system are considered technically feasible. Based on the economic, energy and environmental impacts, it is clear that the use of a vapor collection and control system does not represent a cost-effective option for the storage tanks. At a VOC control cost in excess of $42,000 per ton, the cost of this option far exceeds the environmental benefit or control cost values that are considered economically feasible. For this reason, no specific BACT limit is proposed. Fixed roof tanks represent BACT for VOC emissions from the tanks.

BACT analysis for VOC from Product Loadout Operations

The new storage tanks at the St. Rose Terminal will result in the need for a new product loadout operation. Plans call for a small fraction of the materials to be loaded out by truck at a new loading rack. Because of the low vapor pressure of these materials, projected emissions from this new loadout operation are quite low. A maximum of 0.4 tons per year of VOC emissions are estimated to occur from loadout at the new rack. This estimate is based on a maximum loadout rate of 10,000,000 gallons per year of heavy fuel oil or up to 8,000,000 barrels per year of asphalt.

The methods identified for possible control options for the loadout operations are as follows:

- Technologies defined in NSPS and NESHAPs

- Technologies applied to similar types of sources in practice (as determined by the RBLC and other sources of information)
- Technologies that could reasonably be applied to this source type via technology transfer.

Technologies indentified as a result of this analysis can be divided into two general categories: design and/or work practice standards and add-on controls. The specific techniques in these categories include:

- Submerged filling of transport vehicles
- Vapor balance systems
- Collection and control of displaced vapors

All of the options identified for controlling VOC emissions from the loadout operations are technically feasible. The most effective option for controlling VOC emissions from these tanks is collecting the vent streams and routing them to a control device. The next most effective option is the use of a vapor balance system. The least effective control option is the use of submerged product loading.

Due to the low combined total emissions from the new loadout operations, only the use of submerged loading is cost-effective for controlling emissions from the loadout operations. The cost of alternative approaches for controlling the emissions from the loadout operations is estimated to be at least $10,000 on an annualized cost basis. Since the VOC emissions from the new truck loadout operations are projected at 0.4 tons per year, the estimated control cost-effectiveness for the "add-on" control is in excess of $20,000 per ton. Control of VOC emissions from the loadout operation at this cost is economically infeasible.

<u>BACT Determination for VOC from Loading Rack</u>

IMTT is proposing to use submerged filling for the new truck loadout operation. This work practice standard represents VOC BACT for this emission source.

B. ANALYSIS OF EXISTING AIR QUALITY

Prevention of Significant Deterioration regulations require an analysis of existing air quality for those pollutants to be emitted in significant amounts from a proposed major modification. PM_{10} and NO_X are pollutants of concern in this case.

AERMOD screen modeling of NO_X emissions associated with the modification show a maximum predicted annual impact of 6.21 $\mu g/m^3$, above the significance level of 1 $\mu g/m^3$. Because the annual maximum impact for NO_X is below the de minimis level of 14 $\mu g/m^3$, preconstruction monitoring is not required. However, further refined NAAQS modeling and increment consumption analysis is required.

C. NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS) ANALYSIS

Because the maximum modeled NO_X impacts exceeded the PSD significance level, refined NAAQS modeling was required.

The maximum annual total NO_X impact is predicted to be 51.71 $\mu g/m^3$, 52% if the NAAQS of 100 $\mu g/m^3$ for the annual NO_X averaging period.

Refined modeling demonstrates compliance with the NO_X NAAQS; therefore, IMTT's proposal will not cause or contribute to a violation of the applicable NAAQS standard.

D. PSD INCREMENT ANALYSIS

Because the maximum modeled NO_X impacts exceeded the PSD significance level, a determination of PSD increment consumption was required. The maximum predicted NO_X increment consumption for the Annual averaging period is 2.74 $\mu g/m^3$ (11% of the allowable Class II PSD increment).

Since the predicted maximum increment consumption for NO_X emissions was below the applicable increment standards, the proposed modification will not cause or contribute to any PSD increment violation.

A summary of the air quality analyses is also presented in Table II.

E. SOURCE RELATED GROWTH IMPACTS

Operation of this facility is not expected to have any significant effect on residential growth or industrial/commercial development in the area of the facility. No significant net change in employment, population, or housing will be associated with the project. As a result, there will not be any significant increases in pollutant emissions indirectly associated with IMTT's proposal. Secondary growth effects will include temporary construction related jobs and approximately no new permanent jobs.

F. SOILS, VEGETATION, AND VISIBILITY IMPACTS

There will be no significant impact on area soils, vegetation, or visibility.

G. CLASS I AREA IMPACTS

Louisiana's Breton Wildlife Refuge, the nearest Class I area, is over 100 kilometers from the site, precluding any significant impact.

H. TOXIC EMISSIONS IMPACT

The St. Rose Terminal is a major source of Toxic Air Pollutants (TAPs). The selection of control technology based on the BACT analysis included consideration of control of toxic emissions.

V. CONCLUSION

The Air Permits Division has made a preliminary determination to approve the construction of the Heavy Fuel Oil Tank Construction Project at the St. Rose Terminal near St. Rose in St. Charles Parish, Louisiana, subject to the attached specific and general conditions. In the event of a discrepancy in the provisions found in the application and those in this Preliminary Determination Summary, the Preliminary Determination Summary shall prevail.

SPECIFIC CONDITIONS

St. Rose Terminal
Agency Interest No.: 4885
International Matex Tank Terminals
St. Rose, St. Charles Parish, Louisiana
PSD-LA-736

1. The permittee is authorized to operate in conformity with the specifications submitted to the Louisiana Department of Environmental Quality (LDEQ) as analyzed in LDEQ's document entitled "Preliminary Determination Summary" dated May 2, 2008, and subject to the following emissions limitations and other specified conditions. Specifications submitted are contained in the application and Emission Inventory Questionnaire dated November 29, 2007, along with supplemental information dated May 2, 2008.

MAXIMUM ALLOWABLE EMISSIONS RATES

ID No.	Description	Max. Operating Rate or Capacity	BACT Limits
EQT 312 145-05	Heater 2A	37.8 MM BTU/hr	NO_X - 0.036 lb/MM BTU (Nat. Gas) NO_X - 0.166 lb/MM BTU (No. 2 Oil) VOC - 0.0055 lb/MM BTU
EQT 313 147-05	Heater 4A	37.8 MM BTU/hr	NO_X - 0.036 lb/MM BTU (Nat. Gas) NO_X - 0.166 lb/MM BTU (No. 2 Oil) VOC - 0.0055 lb/MM BTU
EQT 314 148-05	Heater 5A	37.8 MM BTU/hr	NO_X - 0.036 lb/MM BTU (Nat. Gas) NO_X - 0.166 lb/MM BTU (No. 2 Oil) VOC - 0.0055 lb/MM BTU
EQT 360 149-07	Heater 6A	37.8 MM BTU/hr	NO_X - 0.036 lb/MM BTU (Nat. Gas) NO_X - 0.166,lb/MM BTU (No. 2 Oil) VOC - 0.0055 lb/MM BTU
EQT 361 150-07	Heater 7A	37.8 MM BTU/hr	NO_X - 0.036 lb/MM BTU (Nat. Gas) NO_X - 0.166 lb/MM BTU (No. 2 Oil) VOC - 0.0055 lb/MM BTU
EQT 362 151-07	Heater 8A	37.8 MM BTU/hr	NO_X - 0.036 lb/MM BTU (Nat. Gas) NO_X - 0.166 lb/MM BTU (No. 2 Oil) VOC - 0.0055 lb/MM BTU
EQT 363 22-07	Tank 900 Vertical Fixed Roof Tank	4.22 million gal.	VOC – Fixed Roof
EQT 364 23-07	Tank 901 Vertical Fixed Roof Tank	4.22 million gal.	VOC – Fixed Roof
EQT 365 24-07	Tank 902 Vertical Fixed Roof Tank	4.22 million gal.	VOC – Fixed Roof
EQT 366 25-07	Tank 903 Vertical Fixed Roof Tank	4.22 million gal.	VOC – Fixed Roof
EQT 367 26-07	Tank 904 Vertical Fixed Roof Tank	4.22 million gal.	VOC – Fixed Roof
EQT 368 27-07	Tank 905 Vertical Fixed Roof Tank	4.22 million gal.	VOC – Fixed Roof
EQT 369 28-07	Tank 906 Vertical Fixed Roof Tank	4.22 million gal.	VOC – Fixed Roof
EQT 370 29-07	Tank 907 Vertical Fixed Roof Tank	4.22 million gal.	VOC – Fixed Roof
EQT 371 30-07	Tank 908 Vertical Fixed Roof Tank	4.22 million gal.	VOC – Fixed Roof
EQT 372 31-07	Tank 909 Vertical Fixed Roof Tank	4.22 million gal.	VOC – Fixed Roof

SPECIFIC CONDITIONS

St. Rose Terminal
Agency Interest No.: 4885
International Matex Tank Terminals
St. Rose, St. Charles Parish, Louisiana
PSD-LA-736

MAXIMUM ALLOWABLE EMISSIONS RATES

ID No.	Description	Max. Operating Rate or Capacity	BACT Limits
EQT 373 32-07	Tank 910 Vertical Fixed Roof Tank	4.22 million gal.	VOC – Fixed Roof
EQT 374 33-07	Tank 911 Vertical Fixed Roof Tank	4.22 million gal.	VOC – Fixed Roof
EQT 375 34-07	Tank 912 Vertical Fixed Roof Tank	4.22 million gal.	VOC – Fixed Roof
EQT 376 35-07	Tank 913 Vertical Fixed Roof Tank	4.22 million gal.	VOC – Fixed Roof
EQT 377 36-07	Tank 914 Vertical Fixed Roof Tank	4.22 million gal.	VOC – Fixed Roof
EQT 378 37-07	Tank 915 Vertical Fixed Roof Tank	4.22 million gal.	VOC – Fixed Roof
EQT 379 38-07	Tank 603 Vertical Fixed Roof Tank	4.22 million gal.	VOC – Fixed Roof
EQT 380 39-07	Tank 604 Vertical Fixed Roof Tank	4.22 million gal.	VOC – Fixed Roof
EQT 381 40-07	Truck Rack	15,000 gal/hr	VOC – Submerged Fill

2. Heavy Fuel Oil/Asphalt throughput, Emission Point 21-07, shall be limited to no more than 607.6 million gals/yr. The total Heavy Fuel Oil/Asphalt throughput shall be recorded each month, as well as the total Heavy Fuel Oil/Asphalt throughput for the last twelve months. These records shall be kept on site and available for inspection by the DEQ personnel. Throughput above the maximum listed in this specific condition for any twelve consecutive month period shall be a violation of this permit and must be reported to the Office of Environmental Compliance, Enforcement Division. A report showing the Heavy Fuel Oil/Asphalt throughput to the truck loading rack for the preceding calendar year shall be submitted to the Air Quality Division by March 31.

   Emission Point Nos. 22-07 through 39-07.

MAXIMUM ALLOWABLE EMISSIONS RATES

ID No.	Description	Max. Operating Rate or Capacity	Emission Rates
EQT 363 22-07	Tank 900 Vertical Fixed Roof Tank	4.22 million gal.	VOC – Max. Hourly – 12.69 lb/hr VOC – Annual TPY – Capped*
EQT 364 23-07	Tank 901 Vertical Fixed Roof Tank	4.22 million gal.	VOC – Max. Hourly – 12.69 lb/hr VOC – Annual TPY – Capped*
EQT 365 24-07	Tank 902 Vertical Fixed Roof Tank	4.22 million gal.	VOC – Max. Hourly – 12.69 lb/hr VOC – Annual TPY – Capped*
EQT 366 25-07	Tank 903 Vertical Fixed Roof Tank	4.22 million gal.	VOC – Max. Hourly – 12.69 lb/hr VOC – Annual TPY – Capped*

SPECIFIC CONDITIONS

St. Rose Terminal
Agency Interest No.: 4885
International Matex Tank Terminals
St. Rose, St. Charles Parish, Louisiana
PSD-LA-736

MAXIMUM ALLOWABLE EMISSIONS RATES

ID No.	Description	Max. Operating Rate or Capacity	Emission Rates
EQT 367 26-07	Tank 904 Vertical Fixed Roof Tank	4.22 million gal.	VOC – Max. Hourly – 12.69 lb/hr VOC – Annual TPY – Capped*
EQT 368 27-07	Tank 905 Vertical Fixed Roof Tank	4.22 million gal.	VOC – Max. Hourly – 12.69 lb/hr VOC – Annual TPY – Capped*
EQT 369 28-07	Tank 906 Vertical Fixed Roof Tank	4.22 million gal.	VOC – Max. Hourly – 12.69 lb/hr VOC – Annual TPY – Capped*
EQT 370 29-07	Tank 907 Vertical Fixed Roof Tank	4.22 million gal.	VOC – Max. Hourly – 12.69 lb/hr VOC – Annual TPY – Capped*
EQT 371 30-07	Tank 908 Vertical Fixed Roof Tank	4.22 million gal.	VOC – Max. Hourly – 12.69 lb/hr VOC – Annual TPY – Capped*
EQT 372 31-07	Tank 909 Vertical Fixed Roof Tank	4.22 million gal.	VOC – Max. Hourly – 12.69 lb/hr VOC – Annual TPY – Capped*
EQT 373 32-07	Tank 910 Vertical Fixed Roof Tank	4.22 million gal.	VOC – Max. Hourly – 12.69 lb/hr VOC – Annual TPY – Capped*
EQT 374 33-07	Tank 911 Vertical Fixed Roof Tank	4.22 million gal.	VOC – Max. Hourly – 12.69 lb/hr VOC – Annual TPY – Capped*
EQT 375 34-07	Tank 912 Vertical Fixed Roof Tank	4.22 million gal.	VOC – Max. Hourly – 12.69 lb/hr VOC – Annual TPY – Capped*
EQT 376 35-07	Tank 913 Vertical Fixed Roof Tank	4.22 million gal.	VOC – Max. Hourly – 12.69 lb/hr VOC – Annual TPY – Capped*
EQT 377 36-07	Tank 914 Vertical Fixed Roof Tank	4.22 million gal.	VOC – Max. Hourly – 12.69 lb/hr VOC – Annual TPY – Capped*
EQT 378 37-07	Tank 915 Vertical Fixed Roof Tank	4.22 million gal.	VOC – Max. Hourly – 12.69 lb/hr VOC – Annual TPY – Capped*
EQT 379 38-07	Tank 603 Vertical Fixed Roof Tank	4.22 million gal.	VOC – Max. Hourly – 12.69 lb/hr VOC – Annual TPY – Capped*
EQT 380 39-07	Tank 604 Vertical Fixed Roof Tank	4.22 million gal.	VOC – Max. Hourly – 12.69 lb/hr VOC – Annual TPY – Capped*

* The emissions are capped under 21-07, Heavy Fuel Oil/Asphalt Tank Emissions Cap 3, and limited to 68.23 tons per year.

LOUISIANA AIR EMISSION PERMIT
GENERAL CONDITIONS

I. This permit is issued on the basis of the emissions reported in the application for approval of emissions and in no way guarantees that the design scheme presented will be capable of controlling the emissions to the type and quantities stated. Failure to install, properly operate and/or maintain all proposed control measures and/or equipment as specified in the application and supplemental information shall be considered a violation of the permit and LAC 33:III.501. If the emissions are determined to be greater than those allowed by the permit (e.g. during the shakedown period for new or modified equipment) or if proposed control measures and/or equipment are not installed or do not perform according to design efficiency, an application to modify the permit must be submitted. All terms and conditions of this permit shall remain in effect unless and until revised by the permitting authority.

II. The permittee is subject to all applicable provisions of the Louisiana Air Quality Regulations. Violation of the terms and conditions of the permit constitutes a violation of these regulations.

III. The Emission Rates for Criteria Pollutants, Emission Rates for TAP/HAP & Other Pollutants, and Specific Requirements sections or, where included, Emission Inventory Questionnaire sheets establish the emission limitations and are a part of the permit. Any operating limitations are noted in the Specific Requirements or, where included, Tables 2 and 3 of the permit. The synopsis is based on the application and Emission Inventory Questionnaire dated November 29, 2007, along with supplemental information dated May 2, 2008.

IV. This permit shall become invalid, for the sources not constructed, if:

A. Construction is not commenced, or binding agreements or contractual obligations to undertake a program of construction of the project are not entered into, within two (2) years (18 months for PSD permits) after issuance of this permit, or;

B. If construction is discontinued for a period of two (2) years (18 months for PSD permits) or more.

The administrative authority may extend this time period upon a satisfactory showing that an extension is justified.

This provision does not apply to the time period between construction of the approved phases of a phased construction project. However, each phase must commence construction within two (2) years (18 months for PSD permits) of its projected and approved commencement date.

V. The permittee shall submit semiannual reports of progress outlining the status of construction, noting any design changes, modifications or alterations in the construction schedule which have or may have an effect on the emission rates or ambient air quality levels. These reports shall continue to be submitted until such time as construction is certified as being complete. Furthermore, for any significant change in the design, prior approval shall be obtained from the Office of Environmental Services, Air Permits Division.

VI. The permittee shall notify the Department of Environmental Quality, Office of Environmental Services, Air Permits Division within ten (10) calendar days from the date that construction is certified as complete and the estimated date of start-up of operation. The appropriate Regional Office shall also be so notified within the same time frame.

LOUISIANA AIR EMISSION PERMIT
GENERAL CONDITIONS

VII. Any emissions testing performed for purposes of demonstrating compliance with the limitations set forth in paragraph III shall be conducted in accordance with the methods described in the Specific Conditions and, where included, Tables 1, 2, 3, 4, and 5 of this permit. Any deviation from or modification of the methods used for testing shall have prior approval from the Office of Environmental Assessment, Air Quality Assessment Division.

VIII. The emission testing described in paragraph VII above, or established in the specific conditions of this permit, shall be conducted within sixty (60) days after achieving normal production rate or after the end of the shakedown period, but in no event later than 180 days after initial start-up (or restart-up after modification). The Office of Environmental Assessment, Air Quality Assessment Division shall be notified at least (30) days prior to testing and shall be given the opportunity to conduct a pretest meeting and observe the emission testing. The test results shall be submitted to the Air Quality Assessment Division within sixty (60) days after the complete testing. As required by LAC 33:III.913, the permittee shall provide necessary sampling ports in stacks or ducts and such other safe and proper sampling and testing facilities for proper determination of the emission limits.

IX. The permittee shall, within 180 days after start-up and shakedown of each project or unit, report to the Office of Environmental Compliance, Enforcement Division any significant difference in operating emission rates as compared to those limitations specified in paragraph III. This report shall also include, but not be limited to, malfunctions and upsets. A permit modification shall be submitted, if necessary, as required in Condition I.

X. The permittee shall retain records of all information resulting from monitoring activities and information indicating operating parameters as specified in the specific conditions of this permit for a minimum of at least five (5) years.

XI. If for any reason the permittee does not comply with, or will not be able to comply with, the emission limitations specified in this permit, the permittee shall provide the Office of Environmental Compliance, Enforcement Division with a written report as specified below.

A. A written report shall be submitted within 7 days of any emission in excess of permit requirements by an amount greater than the Reportable Quantity established for that pollutant in LAC 33.I.Chapter 39.

B. A written report shall be submitted within 7 days of the initial occurrence of any emission in excess of permit requirements, regardless of the amount, where such emission occurs over a period of seven days or longer.

C. A written report shall be submitted quarterly to address all emission limitation exceedances not included in paragraphs A or B above. The schedule for submittal of quarterly reports shall be no later than the dates specified below for any emission limitation exceedances occurring during the corresponding specified calendar quarter:

1. Report by June 30 to cover January through March
2. Report by September 30 to cover April through June
3. Report by December 31 to cover July through September
4. Report by March 31 to cover October through December

D. Each report submitted in accordance with this condition shall contain the following information:

1. Description of noncomplying emission(s);
2. Cause of noncompliance;
3. Anticipated time the noncompliance is expected to continue, or if corrected, the duration of the period of noncompliance;
4. Steps taken by the permittee to reduce and eliminate the noncomplying emissions; and
5. Steps taken by the permittee to prevent recurrences of the noncomplying emissions.

E. Any written report submitted in advance of the timeframes specified above, in accordance with an applicable regulation, may serve to meet the reporting requirements of this condition provided all information specified above is included. For Part 70 sources, reports submitted in accordance with Part 70 General Condition R shall serve to meet the requirements of this condition provided all specified information is included. Reporting under this condition does not relieve the permittee from the reporting requirements of any applicable regulation, including LAC 33.I.Chapter 39, LAC 33.III.Chapter 9, and LAC 33.III.5107.

XII. Permittee shall allow the authorized officers and employees of the Department of Environmental Quality, at all reasonable times and upon presentation of identification, to:

A. Enter upon the permittee's premises where regulated facilities are located, regulated activities are conducted or where records required under this permit are kept;

B. Have access to and copy any records that are required to be kept under the terms and conditions of this permit, the Louisiana Air Quality Regulations, or the Act;

C. Inspect any facilities, equipment (including monitoring methods and an operation and maintenance inspection), or operations regulated under this permit; and

D. Sample or monitor, for the purpose of assuring compliance with this permit or as otherwise authorized by the Act or regulations adopted thereunder, any substances or parameters at any location.

XIII. If samples are taken under Section XII.D. above, the officer or employee obtaining such samples shall give the owner, operator or agent in charge a receipt describing the sample obtained. If requested prior to leaving the premises, a portion of each sample equal in volume or weight to the portion retained shall be given to the owner, operator or agent in charge. If an analysis is made of such samples, a copy of the analysis shall be furnished promptly to the owner, operator or agency in charge.

XIV. The permittee shall allow authorized officers and employees of the Department of Environmental Quality, upon presentation of identification, to enter upon the permittee's premises to investigate potential or alleged violations of the Act or the rules and regulations adopted thereunder. In such investigations, the permittee shall be notified at the time entrance is requested of the nature of the suspected violation. Inspections under this subsection shall be limited to the aspects of alleged violations. However, this shall not in any way preclude prosecution of all violations found.

LOUISIANA AIR EMISSION PERMIT
GENERAL CONDITIONS

XV. The permittee shall comply with the reporting requirements specified under LAC 33:III.919 as well as notification requirements specified under LAC 33:III.927.

XVI. In the event of any change in ownership of the source described in this permit, the permittee and the succeeding owner shall notify the Office of Environmental Services in accordance with LAC 33:I.Chapter 19.Facility Name and Ownership/Operator Changes Process.

XVII. Very small emissions to the air resulting from routine operations, that are predictable, expected, periodic, and quantifiable and that are submitted by the permitted facility and approved by the Air Permits Division are considered authorized discharges. Approved activities are noted in the General Condition XVII Activities List of this permit. To be approved as an authorized discharge, these very small releases must:

1. Generally be less than 5 TPY
2. Be less than the minimum emission rate (MER)
3. Be scheduled daily, weekly, monthly, etc., or
4. Be necessary prior to plant startup or after shutdown [line or compressor pressuring/depressuring for example]

These releases are not included in the permit totals because they are small and will have an insignificant impact on air quality. This general condition does not authorize the maintenance of a nuisance, or a danger to public health and safety. The permitted facility must comply with all applicable requirements, including release reporting under LAC 33:I.3901.

XVIII. Provisions of this permit may be appealed in writing pursuant to La. R.S. 30:2024(A) within 30 days from receipt of the permit. Only those provisions specifically appealed will be suspended by a request for hearing, unless the secretary or the assistant secretary elects to suspend other provisions as well. Construction cannot proceed except as specifically approved by the secretary or assistant secretary. A request for hearing must be sent to the following:

Attention: Office of the Secretary, Legal Services Division
La. Dept. of Environmental Quality
Post Office Box 4302
Baton Rouge, Louisiana 70821-4302

XIX. For Part 70 sources, certain Part 70 general conditions may duplicate or conflict with state general conditions. To the extent that any Part 70 conditions conflict with state general conditions, then the Part 70 general conditions control. To the extent that any Part 70 general conditions duplicate any state general conditions, then such state and Part 70 provisions will be enforced as if there is only one condition rather than two conditions.

TABLE I: BACT COST SUMMARY

St. Rose Terminal
Agency Interest No.: 4885
International Matex Tank Terminals
St. Rose, St. Charles Parish, Louisiana
PSD-LA-736

Control Alternatives		Availability/ Feasibility	Negative Impacts (a)	Control Efficiency	Emissions Reduction (TPY)	Capital Cost ($)	Annualized Cost ($)	Average Cost Effectiveness ($/ton)	Notes
Hot Oil Heaters									
NO_X	Low NO_X Burners	Yes/Yes	3	62.5/33.9%[b]	10.0/6.73[b]	$53,489	$37,294	$3,712/5,541[b]	Selected
	Low-Low NO_X Burners	Yes/Yes	1,3	75.0/63.5%[b]	12.1/12.6[b]	$362,165	$123,222	$10,222/9,754[b]	
	Ultra-Low NO_X Burners	Yes/Yes	1,3	85.0/69.0%[b]	13.7/13.7[b]	$575,863	$182,711	$13,374/13,327[b]	
Heavy Fuel Oil Storage Tanks									
VOC	Fixed Roof Tanks	Yes/Yes	-	-	-	-	-	-	Selected
	Fixed Roof Tanks w/ VRU and Control	Yes/Yes	1,2,3	95%	64.8	$7,144,287	$2,723,757	$42,033	

Notes:
a) Negative impacts: 1) economic, 2) environmental, 3) energy, 4) safety
b) 100% Natural Gas firing/34% No. 2 fuel oil firing on an annual average for all six heaters assuming full-time operation at 100% capacity based on the proposed fuel oil firing limit of 810,000 gallons per year per heater.

TABLE II: AIR QUALITY ANALYSIS SUMMARY

St. Rose Terminal
Agency Interest No.: 4885
International Matex Tank Terminals
St. Rose, St. Charles Parish, Louisiana
PSD-LA-736

Pollutant	Averaging Period	Preliminary Screening Concentration ($\mu g/m^3$)	Level of Significant Impact ($\mu g/m^3$)	Significant Monitoring Concentration ($\mu g/m^3$)	At the Monitoring Station: Monitored Values ($\mu g/m^3$)	At the Monitoring Station: Modeling results ($\mu g/m^3$)	Background ($\mu g/m^3$)	Maximum Modeled Concentration ($\mu g/m^3$)	Modeled + Background Concentration ($\mu g/m^3$)	NAAQS ($\mu g/m^3$)	Modeled PSD Increment Consumption ($\mu g/m^3$)	Allowable Class II PSD Increment ($\mu g/m^3$)
PM_{10}	24-hour	NR	5	10	NR	NR	NR	NR	NR	150	NR	30
	Annual	NR	1	-	NR	NR	NR	NR	NR	50	NR	17
SO_2	3-hour	NR	25	-	NR	NR	NR	NR	NR	1300	NR	512
	24-hour	NR	5	13	NR	NR	NR	NR	NR	365	NR	91
	Annual	NR	1	-	NR	NR	NR	NR	NR	80	NR	20
NO_X	Annual	6.21	1	14	NR	NR	NR	51.71	NR	100	2.74	25
CO	1-hour	NR	2000	-	NR	NR	NR	NR	NR	40,000	-	-
	8-hour	NR	500	575	NR	NR	NR	NR	NR	10,000	-	-
Lead	3-month	NR	-	0.1	NR	NR	NR	NR	NR	1.5	-	-

NR = Not required.